

# INFECTIOUS DISEASE



## Focus Area 1 - Vaccine-Preventable Diseases

### Definition

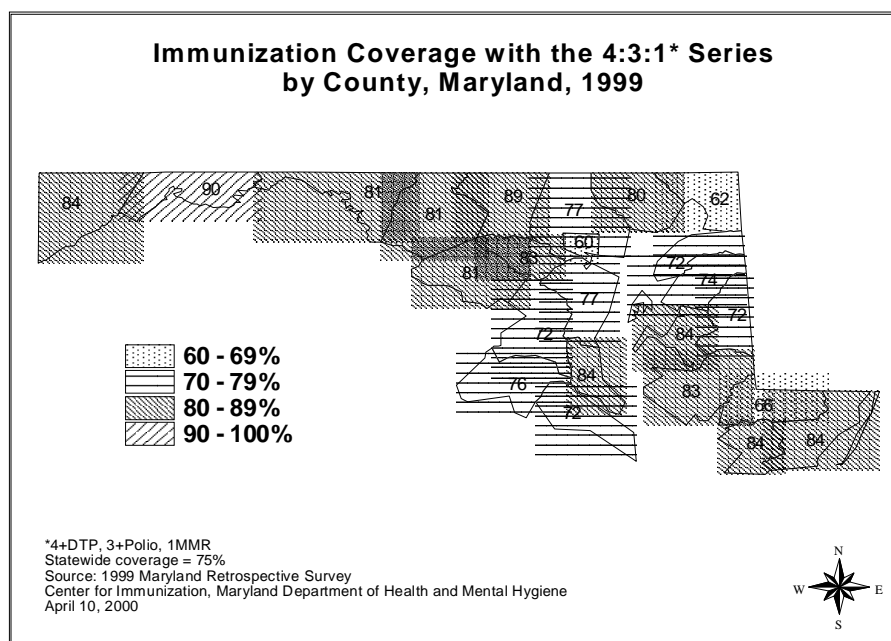
Vaccine-preventable diseases are those that are prevented by the administration of vaccines to susceptible populations.

### Problem

Low immunization rates and diseases that can be prevented by vaccines continue to be concerns in Maryland, especially among preschoolers and the elderly. Although significant progress has been made since 1996, immunization rates are at less than acceptable levels. Vaccine-preventable diseases, such as hepatitis B, *H. influenzae* type B, and pertussis, continue to occur in Maryland. In 1999, the total number of cases of hepatitis B was 148; pertussis was 124; and *H. Influenzae* type B (for children under 7 years) was 1. Many of these cases would have been prevented if the individuals involved had been appropriately vaccinated.

### Determinants

In 1999, the immunization coverage rates for the 4:3:1 series [4 doses Diphtheria/Tetanus/Pertussis (DTP), 3 doses Polio, 1 dose Measels/Mumps/Rubella (MMR)] for children at 19 to 35 months of age was 80% in Maryland. This is identical to the national average. A similar situation occurs for the 4:3:1:3 series (4 doses DTP, 3 doses Polio, 1 dose MMR, 3 doses Hepatitis B) where both Maryland and the United States have a coverage rate of 79% for children 19 to 35 months of age. Maryland's coverage rates need to increase in order for more vaccine-preventable diseases to be prevented. Barriers and obstacles to increasing coverage rates and preventing vaccine-preventable diseases are public awareness, provider education, cost, and service availability.



## Sub-Populations

The target populations for improving immunization coverage levels are the following: children, ages birth to two years (estimated at 172,031 for 1998); and adults, ages 50 years and older (estimated at 1,349,994 for 1998). Current estimates for 1999 by the Centers for Disease Control and Prevention's National Immunization Survey place Maryland at 80% for the 4:3:1 vaccination series. Our goal of reaching 90% coverage for the 4:3:1 vaccination series is identical to the national goal.

### Immunization Coverage Rates Among Children in Nursery School and Kindergarten During the 1999-2000 School Year

	Nursery School	Kindergarten
Diphtheria-Tetanus-Pertussis	98%	99%
Measles-Mumps-Rubella	99%	98%
<i>Haemophilus influenzae</i> type b	99%	NA
Polio	98%	99%

**Source:** 1999-2000 New Enterers Survey, Maryland Center for Immunization, DHMH

Note: Includes both public and private schools.

**Objective 1** - Achieve immunization coverage (4 DTP, 3 Polio, 1 MMR) of at least 90% among children 19 to 35 months of age.

### Action Steps

- ⇒ Maintain high immunization coverage rates during early childhood.
- ⇒ Monitor coverage levels to help direct strategies to increase vaccination and reduce the risk of future disease outbreaks.
- ⇒ Educate health care providers about and promote commitment to proper immunization practices, and educate the public about the protective health benefits of vaccination.

**Objective 2** - Maintain immunization coverage at 95% for children in nursery school and kindergarten.

### Action Step

- ⇒ Enhance outreach activities provided by local health department staff in order to identify children who are delinquent in their immunizations.

Immunization requirements for kindergarten and nursery school are the most effective interventions Maryland has to ensure that children are appropriately vaccinated.

**Objective 3 -** Increase to 90% the rate of immunization coverage (influenza and pneumococcal) among adults 50 years of age or older; and to 60% for high risk adults 18 to 49 years of age.

### **Action Step**

- ⇒ Target those with high-risk conditions (e.g. heart disease, diabetes, asthma) and persons living in institutional settings.

Vaccination is an effective strategy to reduce illness and death due to influenza and pneumococcal disease. Current coverage levels among adults vary widely by age group. Results from CDC's 1997 Behavioral Risk Factor Surveillance System for Maryland found that 63% of adults 65 years of age and older were vaccinated against influenza and only 41% were vaccinated against pneumococcus. Both influenza and pneumococcal vaccines are covered by Medicare, which supports the feasibility of vaccinating greater number of older adults. As the population ages, an increasing number of adults will be at risk for death and illness from influenza and pneumococcal disease.

**Objective 4 -** Maintain at 95% the number of two-year-old children who receive vaccinations as part of comprehensive primary care.

### **Action Step**

- ⇒ Educate health care providers about and promote commitment to proper immunization practices.

This strategy will help increase the number of children who receive vaccination as part of comprehensive primary care. Vaccine distribution data from the Vaccine For Children Program shows that approximately 95% of children receive vaccine from a primary care provider. Parents whose children have a regular source of primary care prefer to have their children vaccinated at the office of the primary care provider rather than be referred to another provider to be immunized. Referrals from a primary care provider to a clinic cause missed opportunities for immunization, which are associated with incomplete vaccination. Interventions to bring incompletely vaccinated children to their primary care provider are also known to improve other health aspects such as lead exposure and anemia screening.

**Objective 5** - Increase the percentage of immunization providers who have systematically measured the immunization coverage levels in their practice population.

### **Action Step**

- ⇒ Assess practice-based coverage levels and provide feedback of those data to the providers.

This has been an effective strategy for increasing immunization of children served by a given practice. Many providers overestimate the immunization coverage rates of their patients. Managed care organizations have begun reporting immunization coverage levels using Health Plan Employer Data and Information Set (HEDIS) criteria in order to evaluate quality of care. Working with the Advisory Committee on Immunization Practices, the American Academy of Pediatrics, and the American Academy of Family Practitioners, who have also recommended practice-based assessment, will help reach this goal.

**Objective 6** - Increase the number of children enrolled in a fully functional population-based immunization registry.

### **Action Step**

- ⇒ Support development of a statewide immunization registry.

A fully functioning registry includes the capabilities to automatically enroll all children at birth, give provider access to a child's complete immunization history, be able to recommend needed immunizations, recall children who are overdue for immunizations, and assess coverage at the practice and geographical levels. Currently Maryland has approximately 6,000 children enrolled in a registry, the majority of whom are in Baltimore City. The Maryland Department of Health and Mental Hygiene, along with the American Academy of Pediatrics, remains committed to reaching this goal.

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## **Partners**

Centers for Disease Control and Prevention • Epidemiology and Disease Control Program, DHMH • Howard Community College • Maryland Chapter of American Academy of Pediatrics • Maryland Chapter of American Academy of Family Practitioners • Maryland Immunization Partnership • Maryland Local Health Departments • Maryland Partnership for Prevention • MedChi—the Maryland State Medical Society

## **Focus Area 2 -Prevention of Infections Acquired Within Healthcare Facilities (Nosocomial Infections)**

### **Definitions**

A nosocomial infection is an infection acquired within a health care facility. To be considered associated with a facility, the infection must not have been present or incubating at the time of admission to the facility. An infection that develops within 48 to 72 hours of admission is generally considered to be community-acquired, not healthcare facility-acquired, because it is likely that it was incubating prior to admission.

The Department of Health and Mental Hygiene provides infection control guidance and recommendations to professionals at all Maryland healthcare facilities—hospitals, nursing homes, and home health agencies—through a process called consultation. The consultations cover many topics, such as handling medical waste, hepatitis B vaccination for healthcare workers, and preventing antibiotic resistance.

### **Problem**

Healthcare facility-acquired, or nosocomial, infections occur at a rate of approximately five to 10 per 100 admissions in U.S. hospitals. They result in increased morbidity and mortality and have a direct cost of up to \$10 billion annually. Nosocomial infections occur at approximately the same rates in Maryland, although since Maryland law protects the confidentiality of certain medical information, specific rates of some infections for individual Maryland hospitals are not obtainable. A rate of over five infections per 100 admissions may indicate a nosocomial outbreak situation.

As the 1990s ended, one particular nosocomial infection, Legionnaires' disease, received much attention in Maryland. Nationwide, up to 15% of all nosocomial pneumonias are cases of Legionnaires' disease, and the rate is probably similar in Maryland. Maryland health care facilities employ a variety of strategies to prevent nosocomial Legionnaires' disease, and a Maryland task force (The Scientific Work Group to Study Legionella Bacteria in Water Systems) examined the scientific literature to determine which prevention strategies are most effective.

For consultations to be effective, they must be completed in a timely manner. Systematic tracking of the response time for consultations began near the end of the 1990s.

### **Determinants**

Many factors, only some of which are amenable to manipulation, affect nosocomial infection rates. Some of these factors are invasive medical procedures, immunosuppressive therapies, the emergence of antibiotic resistant organisms, and exposure to other infected patients. Factors unique to the individual also make some persons more susceptible to nosocomial infections, including advanced age, poor nutritional status, and underlying illnesses.

## High-Risk Sub-Populations

Certain persons are known to be at increased risk for acquiring nosocomial infections, including:

- Persons with severe underlying disease
- Persons undergoing invasive diagnostic and treatment modalities
- Persons with compromised immune systems
- Persons exposed to infectious organisms in the facility

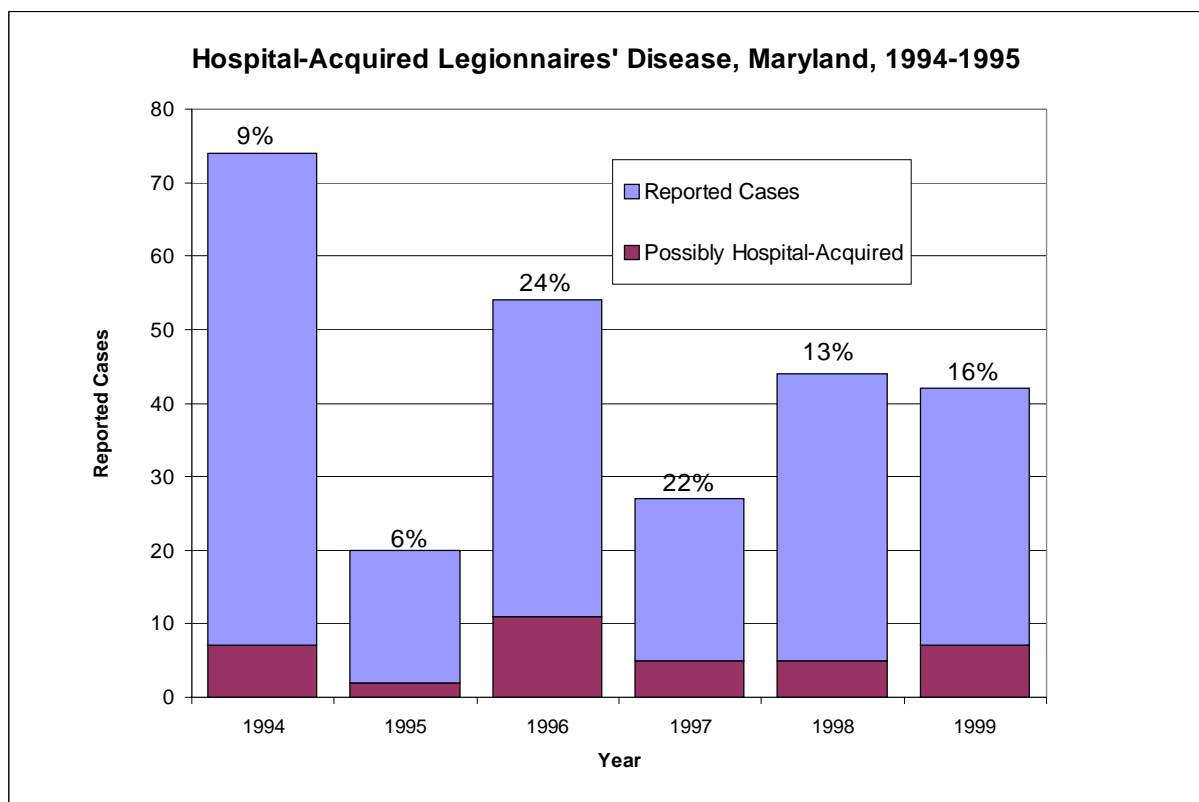
**Objective 1** - By 2010, complete 95% of consultations within 48 hours.

**Objective 2** - By 2010, develop enhanced surveillance for nosocomial infections within Maryland home health agencies and subacute and long-term care facilities.

**Objective 3** - By 2010, improve the recognition of nosocomial Legionnaires' disease and reduce the rate from approximately 15% to <10% of nosocomial pneumonias.

## Action Steps

- ⇒ Develop a system to answer infection control queries within 48 hours of their request.



**Source:** Maryland, 1994-99 (MERSS)

**Note:** The Healthy Maryland 2010 objective is to maintain the proportion of hospital-acquired Legionnaires'

- ⇒ Continue to monitor consultation response times.
  - ⇒ Continue to provide expert infection control consultation in the following areas:
    - Infectious disease processes
    - Surveillance and epidemiologic outbreak investigation
  - ⇒ Promote:
    - Prevention and control of the transmission of infectious agents.
    - Infection control program management.
    - Infection control education.
  - ⇒ Develop nosocomial Legionnaires' disease prevention guidelines using input from the Scientific Work Group to Study Legionella Bacteria in Water Systems.
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## Partners

Association for Professionals in Infection Control and Epidemiology, Inc.: Greater Baltimore Chapter, Delmarva Chapter, Metro Washington D.C. Chapter • Department of Health and Mental Hygiene, Infection Control Professionals • Epidemiology and Disease Control Program, DHMH • Maryland Hospital Association • Maryland Local Health Departments • Scientific Work Group to Study Legionella Bacteria in Water Systems (composed of specialists from the University of Maryland, Baltimore County; Johns Hopkins Hospital; Franklin Square Hospital; Science Applications International Corporation; and J.F. Korner Consulting, Inc.)

## Related Reports

American Journal of Infection Control. (1996). National nosocomial infections surveillance (NNIS) report. *American Journal of Infection Control*, 24, 380-388.

## Focus Area 3 -Preventing Diseases Spread By Animals and Insects (Zoonotic and Arthropod-Borne Diseases)

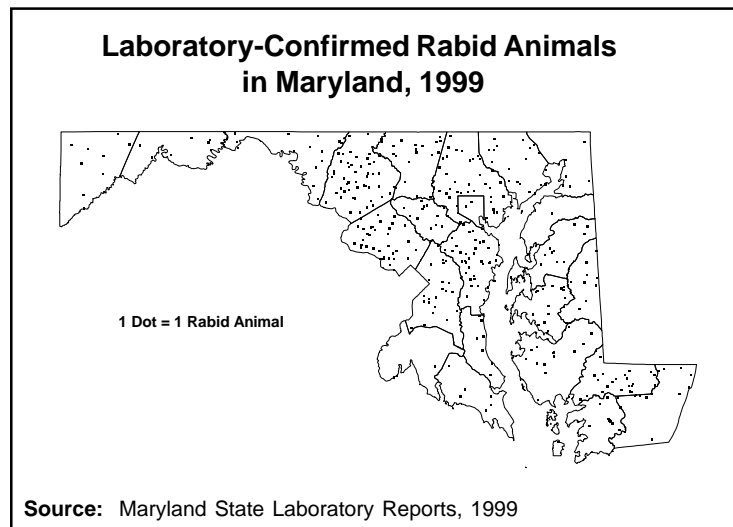
### Definitions

Zoonotic diseases are infections which are naturally transmitted between vertebrate animals (animals with a spinal column, like dogs, cats, and raccoons) and humans. Arthropods are a class of animals that include insects, spiders, and ticks. Like vertebrate animals, arthropods can spread infections to humans and other animals.

### Problem

Zoonotic and arthropod-borne diseases occur throughout Maryland. Some, like salmonellosis are common. Others, like Lyme disease, are less frequent. Still others, like rabies, currently exist only in other animals, but can spread to humans. However, regardless of how common certain zoonotic and arthropod-borne diseases are, they remain important public health problems in Maryland.

Rabies, for example, is found in a variety of animals in all areas of the State. If a human is bitten by a rabid animal, unless the person undergoes appropriate treatment, the resulting disease is almost invariably fatal. The last human rabies death in Maryland was in 1976, but a Virginia man died of rabies in 1998. Lyme disease, which is a tick-borne disease, is another important public health problem in Maryland. The number of confirmed cases of Lyme disease reported increased dramatically from 185 cases in 1992 to more than 800 in 1999. Furthermore, newly emerging zoonotic and arthropod-borne diseases pose a threat to Maryland. For example, in August 1999, an outbreak of West Nile virus occurred in New York City. A West Nile virus-infected crow was found as far south as Baltimore. Other mosquito- and tick-borne diseases also can occur in Maryland citizens.



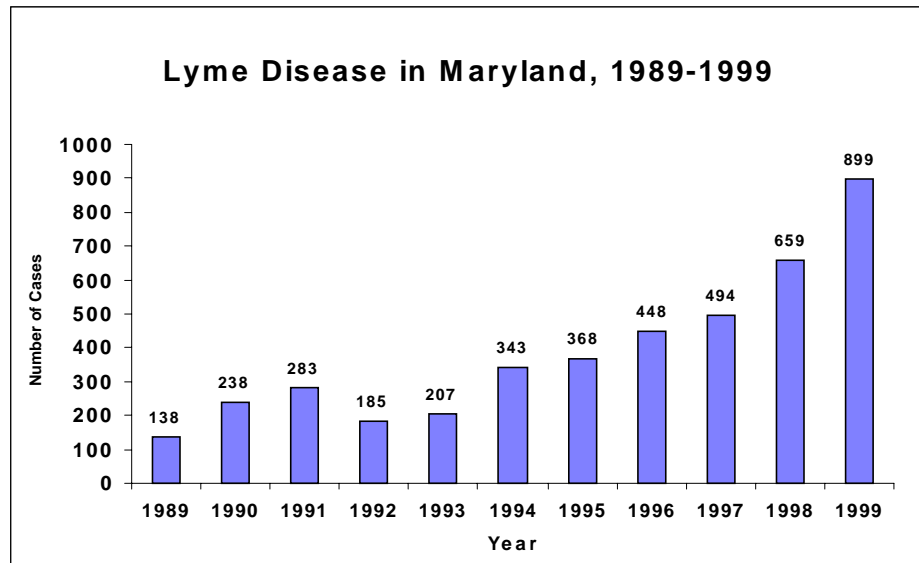
### Major Determinants

Zoonotic and arthropod-borne diseases develop when there is contact between humans and disease-carrying animals. Such contact occurs frequently—even in people who do not have pets or work with animals. That is why preventing zoonotic and arthropod-borne diseases requires many different approaches, including education of humans about individual prevention measures, vaccination of animals when possible, and wildlife control.

Humans may develop rabies if exposed to a rabid animal. In Maryland, rabies is found most often in raccoons, foxes, cats, bats, groundhogs, and skunks posing a potential threat to humans. Other mammals, including dogs and farm animals can also get rabies.

Lyme disease results from frequent environmental exposure to tick-infested habitats, which exist throughout Maryland.

Surveillance for arthropod-borne viral diseases among humans is limited, because health care providers often do not test for these illnesses, so locally relevant predictors of such diseases in humans are not well characterized. These predictors might be better known if human surveillance is improved and correlated with animal surveillance data. Evidence of increased or early disease activity in animal populations may herald an outbreak of arboviral illness in humans.



**Source:** Maryland MERSS, 1989-1999

**Note:** Number of cases of Lyme Disease reported to Maryland local health departments from 1980-1999 (MERSS).

**Objective 1** - Prevent any human rabies cases from occurring over the next decade through continuation of a comprehensive rabies prevention program.

**Objective 2** - By 2010, reduce by 50% the number of rabid animals (wild animals as well as pets and domestic animals) in Maryland.

**Objective 3** - By 2010, reduce the cases of Lyme disease by 15 %; from 899 in 1999 to 764 in 2010.

### Action Steps

- ⇒ Provide prevention/education programs that deal with zoonotic and arthropod-borne diseases for a variety of audiences throughout Maryland.
- ⇒ Enhance effective animal control programs (removal of stray animals, spay/neuter programs) and animal vaccination programs to reduce human exposures to possibly rabid pets (i.e. dogs, cats, and ferrets).

- ⇒ Assist in the creation and evaluation of oral rabies bait programs for wild animals in Maryland.
  - ⇒ Provide up-to-date educational materials to local health departments and to other Maryland residents, including current materials about the appropriate use of repellants and pesticides, to reduce human exposures to ticks, mosquitoes, and other disease-causing arthropods.
  - ⇒ Develop a surveillance program to detect West Nile virus and other arthropod-borne diseases in Maryland.
  - ⇒ Increase collaboration with other State agencies involved in animal control, disease reporting, and prevention activities.
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## Partners

Baltimore Zoo • Epidemiology and Disease Control Program, DHMH • Maryland Department of Agriculture • Maryland Department of Natural Resources, Wildlife and Heritage Division • Maryland Local Health Departments • Mosquito Control and Animal Health Divisions • United States Department of Agriculture • Virginia-Maryland Regional College of Veterinary Medicine

## References

- Centers for Disease Control and Prevention. (1999). Human Rabies Prevention – United States, 1999: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morbidity and Mortality Weekly Report, Recommendations and Reports*, 48 (RR-1), 1-21.
- Karp, Beth, et al. (1999). Rabies in two privately owned domestic rabbits. *Journal of the American Veterinary Medical Association*, 215 (12), 1824-7.
- Maryland Department of Health & Mental Hygiene, Community & Public Health Administration, Center for Veterinary Public Health. (2000). *Veterinary public health website*. Available: [http://edcp.org/html/vet\\_med.html](http://edcp.org/html/vet_med.html).
- National Association of State Public Health Veterinarians. (2000). *Compendium of animal rabies prevention and control, 2000*. (updated annually).

## Focus Area 4 - Reducing and Controlling Foodborne Illness

### Definitions

Foodborne illness refers to illness resulting from the consumption of food contaminated with infectious microorganisms or toxic substances.

A foodborne illness outbreak is defined as two or more epidemiologically-related cases of illness following the consumption of a common food or a single case of botulism, cholera, mushroom poisoning, or fish poisoning (ciguatera poisoning, scombroid poisoning, paralytic shellfish poisoning, or other neurotoxic shellfish poisoning).

A foodborne pathogen is an infectious microorganism (bacteria, virus, parasite, or fungus) that can cause foodborne illness.

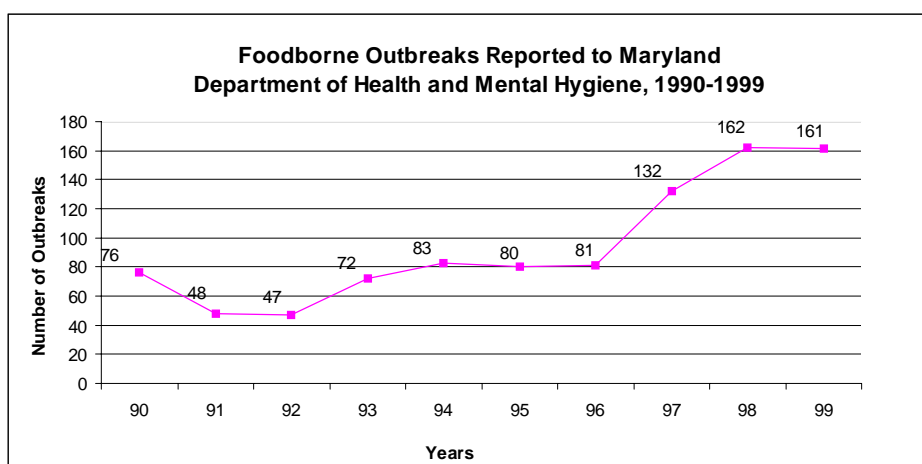
### Problem

Foodborne illnesses are common. According to the Centers for Disease Control and Prevention (CDC), approximately 60 to 80 million foodborne infections occur each year in the United States, resulting in at least 9,000 deaths annually.

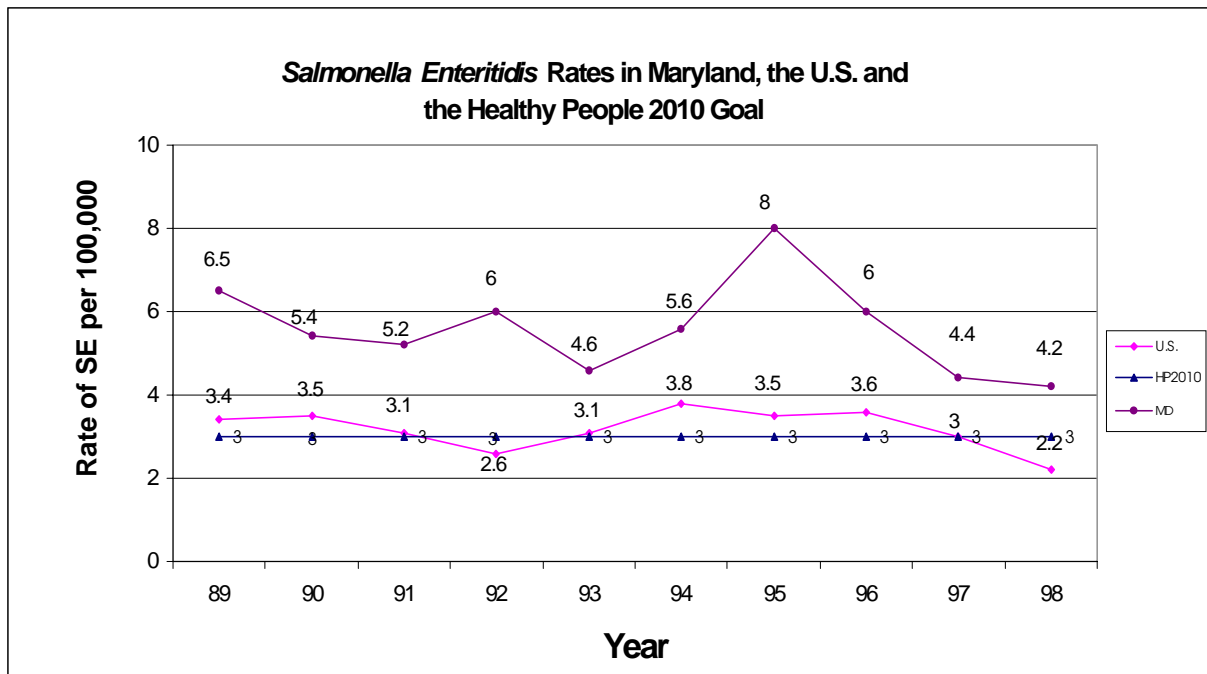
Foodborne illnesses can cause other complications such as localized infections, septicemia, abortion, arthritis, hemolytic uremic syndrome (HUS), and Guillain-Barre syndrome. Medical costs and lost wages associated with salmonellosis, one type of foodborne illness, are estimated to be \$1 billion each year. New foodborne pathogens (like cyclospora, a parasite, and *E. coli* O157:H7) continue to emerge.

The number of foodborne outbreaks has increased in Maryland over the past 10 years. The highest numbers of foodborne outbreaks were reported in 1998 and 1999. In 1999, there were 161 foodborne outbreaks reported, four times the number reported in 1992.

*Salmonella* serotype *Enteritidis*, a common bacterial foodborne pathogen, is a frequent cause of foodborne illness in Maryland. Overall, the rates of *Salmonella Enteritidis* have been declining in Maryland. Over the last decade, the peak case rate was in 1995 (8.0 cases per 100,000 population). By 1998, the rate declined to 4.2 cases per 100,000, which is almost half the case rate reported in 1995. However, the *Salmonella Enteritidis* rates in Maryland are still much higher than the rates in the United States overall.



Source: Maryland Outbreak Database. Division of Outbreak Investigation, EDCP, DHMH



**Source:** Maryland Electronic Reporting and Surveillance System (MERSS), Division of Communicable Disease Surveillance, EDCP, DHMH, CDC Foodborne and Diarrheal Diseases Branch

**Note:** The U.S. rates are provided by CDC's Rates of Isolation of *Salmonella Enteritidis* by Year 1989-1998. This rate is used as an estimation of the U.S. case rate.

## Determinants

Factors that are known to contribute to foodborne illnesses include inadequate handwashing by persons preparing food, consumption of inadequately-washed produce, consumption of raw and undercooked meats, improper storage of foods, and cross-contamination of cooked or ready-to-serve foods with raw meat products. As the 20th Century closed, nationally, the overall incidence of reported foodborne outbreaks remained stable. However, the proportion of outbreaks caused by non-traditional foods like fruits and vegetables has been increasing. Newly identified pathogens, different detection methods, changes in consumer behavior, new agricultural practices, and increased importation of foods have all contributed to this increase. Resistance of foodborne pathogens to antimicrobial agents may also be a factor contributing to foodborne illnesses.

## Population At Risk

All Marylanders, particularly:

- elderly;
- infants; and
- persons with impaired immune systems.

**Objective 1** - By 2010, reduce all foodborne outbreaks by 20% (161 reports in 1999 to 123).

**Objective 2** - By 2010, reduce the incidence of *Salmonella Enteritidis* infections from 4.0 cases per 100,000 in 1999 to no more than 2.0 cases per 100,000 population.

### Action Steps

- ⇒ Rapidly identify foodborne outbreaks and implement control measures to prevent additional illnesses.
  - ⇒ Promote the use of proper food handling procedures in all licensed food services facilities and in the home (e.g., provide education on handwashing).
  - ⇒ Increase the number of training workshops in safe food handling procedures through certification courses developed by local health departments.
  - ⇒ Increase public awareness of safe food handling practices (e.g., distribute fact sheets on foodborne illnesses, post updated information on foodborne illnesses on DHMH Web site).
  - ⇒ Promptly investigate every reported case of *Salmonella Enteritidis* and other foodborne pathogens to determine possible exposures.
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### Partners

Centers for Disease Control and Prevention • Central Atlantic States Association of Food and Drug Officials (CASA) • Epidemiology and Disease Control Program, DHMH • Food and Drug Administration (FDA) • Johns Hopkins University School of Public Health, Student Outbreak Response Team • Maryland Local Health Departments • Restaurant Association of Maryland • United States Department of Agriculture (USDA) • University of Maryland, Baltimore County

### Related Reports

Maryland Department of Health and Mental Hygiene, Division of Outbreak Investigation. (1997, June). Foodborne disease investigations training.

U.S. Department of Health and Human Services, National Center for Infectious Diseases, Division of Bacterial and Mycotic Diseases, Food and Diarrheal Diseases Branch. (1989-1998). *Salmonella surveillance*.

## Focus Area 5 - Preventing Tuberculosis

### Definition of Tuberculosis

Tuberculosis (TB) is an airborne communicable disease that remains one of the most deadly infectious respiratory diseases in the world. In 1998, the World Health Organization (WHO) attributed approximately eight million cases and about two million deaths to tuberculosis. The disease is caused by *Mycobacterium tuberculosis* which is carried through the air as tiny droplets that are generated when an individual with pulmonary or laryngeal TB coughs, speaks, sings, or sneezes. Infection and disease occur when the bacteria are inhaled and lodge in the alveoli of the lungs. An individual infected with *M. tuberculosis* has a 10% chance of developing disease over his or her life; if also infected with HIV, the risk of developing active disease increases to 10% per year.

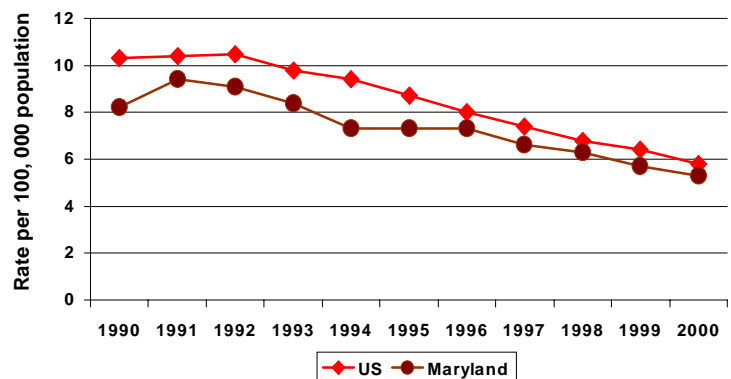
Each TB case requires comprehensive follow-up to assure completion of at least six months of treatment and to prevent the development of drug resistance. Even the most uncomplicated case of TB requires the patient to take multiple antibiotics for six months. Complicating factors, such as HIV/AIDS, require even more extensive monitoring and longer treatment regimens.

### Problem

The rates of tuberculosis have remained fairly stable over the past decade in Maryland, primarily due to the adoption of directly observed therapy as the model of care delivery by local TB control programs. In 2000, 282 cases of tuberculosis were reported in Maryland. Although tuberculosis rates in Maryland overall showed a steady decline during the 1990s, cases are increasing within certain populations. Populations of particular concern include young adults co-infected with HIV, prisoners, refugees and immigrants, the homeless, and intravenous substance abusers.

In 1999, for the first time, foreign-born patients comprised over 50% of all tuberculosis cases diagnosed in Maryland. In Montgomery County, foreign-born individuals accounted for 95% of all tuberculosis cases in 1999. Poverty, lack of access to health care, and HIV co-infection continue to be associated with higher TB case rates in certain population sub-groups.

**Tuberculosis Incidence Rates in Maryland and the U.S., 1990 to 2000**



Source: DHMH, CPHA, EDCP, Division of TBCRMH, 2000

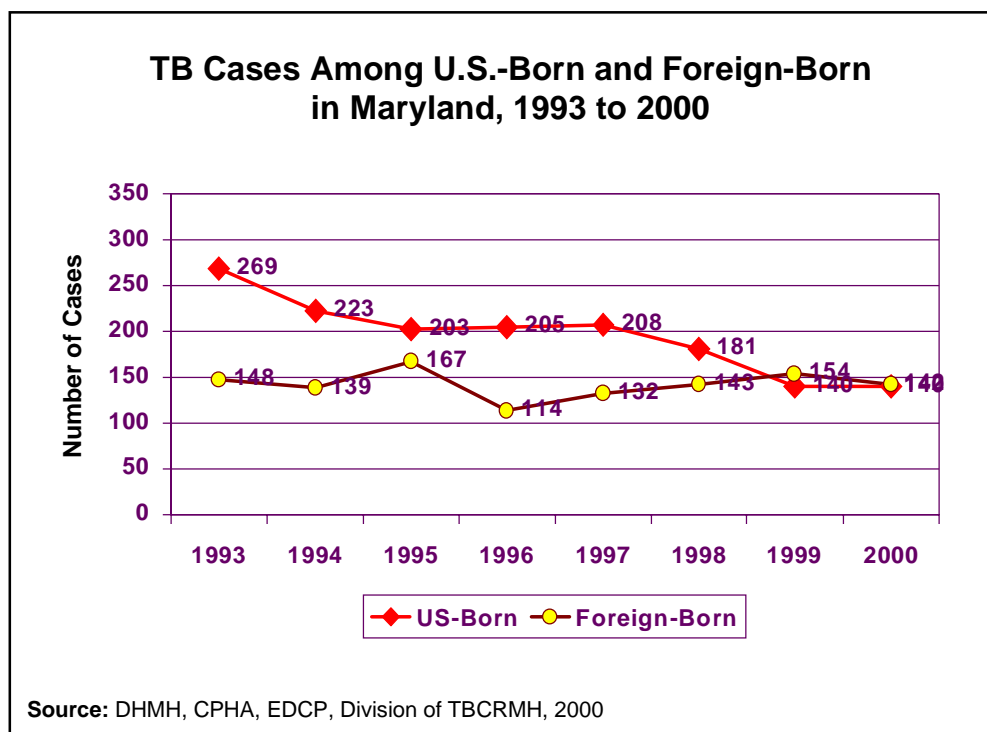
Multiple drug resistant TB (TB strains resistant to the two primary tuberculosis medications, rifampin and isoniazid), while an increasing problem worldwide, accounts for less than one percent of Maryland TB cases. However, the number of Maryland TB cases who carry strains resistant to at least one of these first-line medications is increasing.

Current anecdotal evidence suggests delays in diagnosing active TB may be occurring in the State. This is also a concern.

## Determinants

Tuberculosis rates from 1990-2000 are depicted in the preceding graphic. The national goal of reaching a case rate of 1.0 per 100,000 is not likely to be achieved in Maryland with an increasing refugee population and increasingly difficult to treat population sub-groups. We would expect to achieve a rate of 2.0 per 100,000 by 2010 if funding levels are maintained and we are able to contain drug-resistant disease, increase treatment for latent tuberculosis infection (particularly in the foreign-born), and are able to increase access to new surveillance and laboratory technologies for local health department programs.

Steadily declining rates of TB in Maryland's U.S.-born population are attributed to the use of Directly Observed Therapy (DOT) for most of the past decade across the state, a declining, elderly U.S.-born TB-infected population, and very little drug resistance. Factors that contribute to Maryland's growing foreign-born population are immigrants choosing to resettle in Maryland, the use of foreign-born workers by Maryland businesses, the attraction of Maryland universities and colleges to foreign students, and the relocation of refugees from foreign countries.



**Objective 1** - Reduce the Maryland tuberculosis case rate from 5.6 per 100,000 in 1999 to 2.0 per 100,000 in 2010.

**Action steps**

- ⇒ Maintain a 90% or better completion rate for treatment of all cases.
- ⇒ Continue the use of Directly Observed Therapy (DOT) for administering TB treatment. Continue provision of anti-TB medications to patients without charge.
- ⇒ Increase the average number of contacts to tuberculosis cases identified and screened. Provide treatment to those found to be infected. Ensure treatment is completed.
- ⇒ Develop new strategies for reaching high-risk populations. Increase screening activities; provide treatment of latent infection; with DOT if necessary.
- ⇒ Develop and conduct education for medical professionals regarding tuberculosis.

**Objective 2** - Decrease delays in the diagnosis and treatment of active tuberculosis disease by 50%.

**Action Steps**

- ⇒ Evaluate reasons for delays in diagnosis of active disease. Educate health care providers based on results.
- ⇒ Promote aggressive identification of contacts to confirmed and suspected TB cases by developing and using standardized tools, ensuring close follow-up and monitoring of investigation results, and providing for completion of treatment for those infected.
- ⇒ Support the acquisition of rapid diagnostic techniques for TB by the State Laboratory so that suspected TB cases can be confirmed and reported within 48 hours.
- ⇒ Eliminate unnecessary and costly screening of population groups in which the prevalence of TB infection is extremely low, so use of limited health department resources can be directed to high-risk populations.

**Objective 3** - Increase TB prevention and control efforts in high-risk populations throughout the State.

Action Steps

- ⇒ Develop new strategies with local health departments and community groups for reaching high-risk and socially disenfranchised populations utilizing the results of local surveillance and research.
- ⇒ Provide for the treatment of infected individuals and ensure treatment is completed using available resources, e.g. DOT, community outreach workers, etc.
- ⇒ Continue support of “language line” and other translation services for local health department activities.

Partners

AIDS Administration, DHMH • American Lung Association (Maryland Affiliate) • The Annie E. Casey Foundation • Baltimore City Health Department • Baltimore Medical Systems, Inc. • Choptank Community Health Systems, Inc. • Eastern Shore Area Health Education Center • Epidemiology and Disease Control Program, DHMH • Greater Baden Medical Services, Inc. • The Johns Hopkins Medical Institution, Schools of Medicine and of Public Health • Maryland Department of Public Safety and Correctional Services • Maryland Governor’s Commission on Migratory and Seasonal Farm Labor • Maryland Local Health Departments • Maryland Office of New Americans (MONA) • Maryland State Board of Education • Maryland State Department of Education, Migrant Education Service Center and School-Based Health Programs • Maryland Thoracic Society • Maryland Tuberculosis Expert Panel • Med-Chi—the Maryland State Medical Society • Metropolitan Council of Governments (COG) • National Jewish Medical and Research Center for Respiratory Disease • New Jersey Medical School, National Tuberculosis Center • Telemon Corporation • Three Lower Counties Community Services • University of Maryland, Baltimore

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Advisory Council for the Elimination of Tuberculosis (ACET). (1999). Tuberculosis revisited: obstacles, opportunities, and a renewed commitment. *Morbidity and Mortality Weekly Report, Recommendations and Reports*, 48 (RR-9), 4.

Centers for Disease Control and Prevention. (1994). Guidelines for preventing the transmission of *Mycobacterium tuberculosis* in health-care facilities. *Morbidity and Mortality Weekly Report, Recommendations and Reports*, 43 (RR-13), 4-5.

Cross-Reference Table for Immunization and Infectious Disease	
See Also	
Washington County .....	275